

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions
(formerly Eaton)

Brand: STREETWORKS

Report Number: P159740

Luminaire Tested: **VST-E02-LED-E-U-T4**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P159740
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33707)
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: STREETWORKS
Catalog Number: VST-E02-LED-E-U-T4
Description: VENTUS LED SITE/ROADWAY LUMINAIRE
(2) LIGHTBARS WITH AccuLED OPTICS - TYPE 4 SHORT
Light Source: (42) 4000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5952.7 lumens
Efficiency: N/A
Efficacy: 114.3 lumens/watt
Luminous Opening: Rectangular (W 0.33' x L: 1' x H: 0')
IES Classification: Type IV - Short - Semi-Cutoff
BUG Rating: B1 - U0 - G2

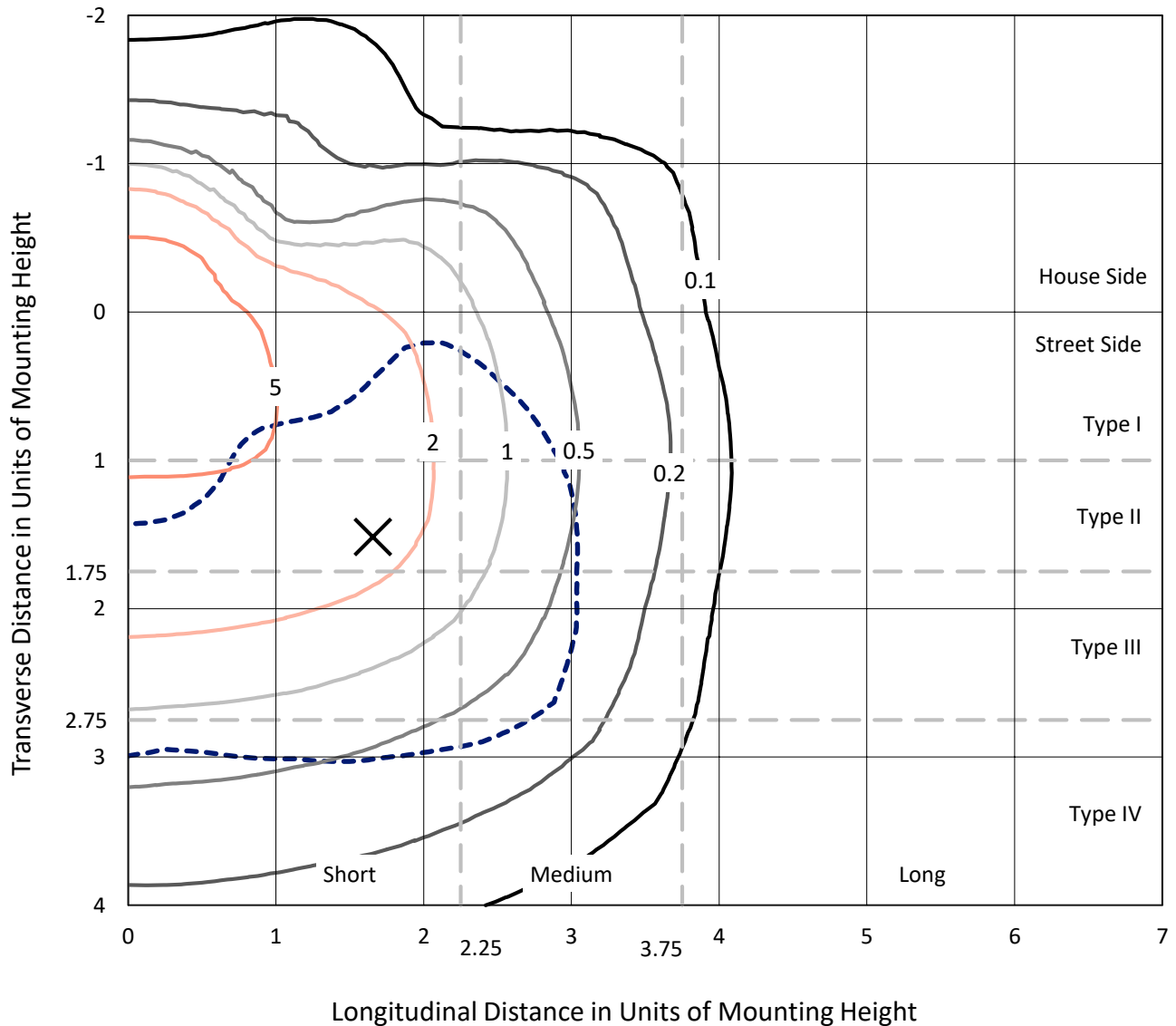
Input Watts (W): 52.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

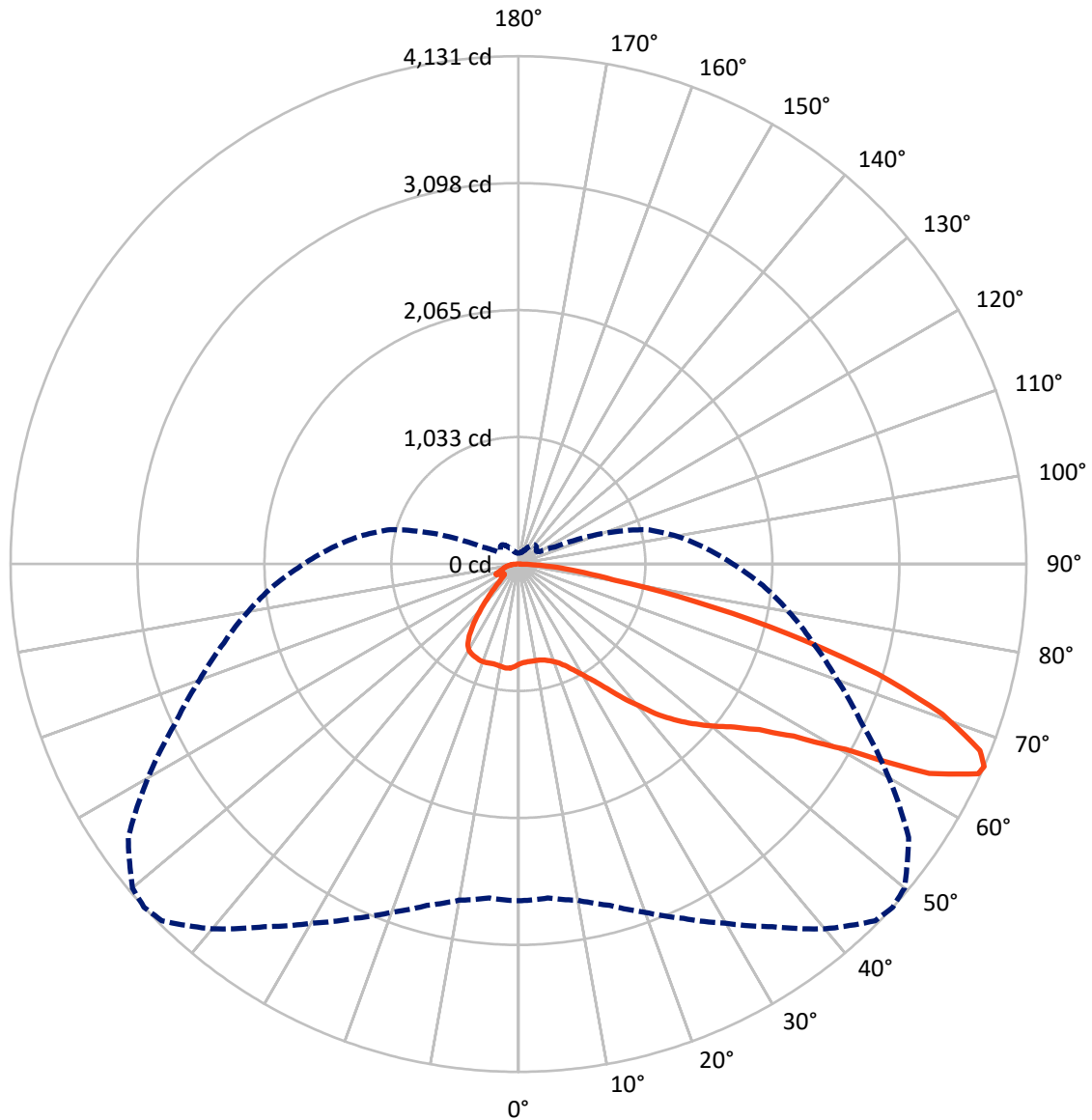
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 8.3 fc
 Type IV - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 47.5-Deg Lateral - - - Horizontal Cone Through 66-Deg Vertical



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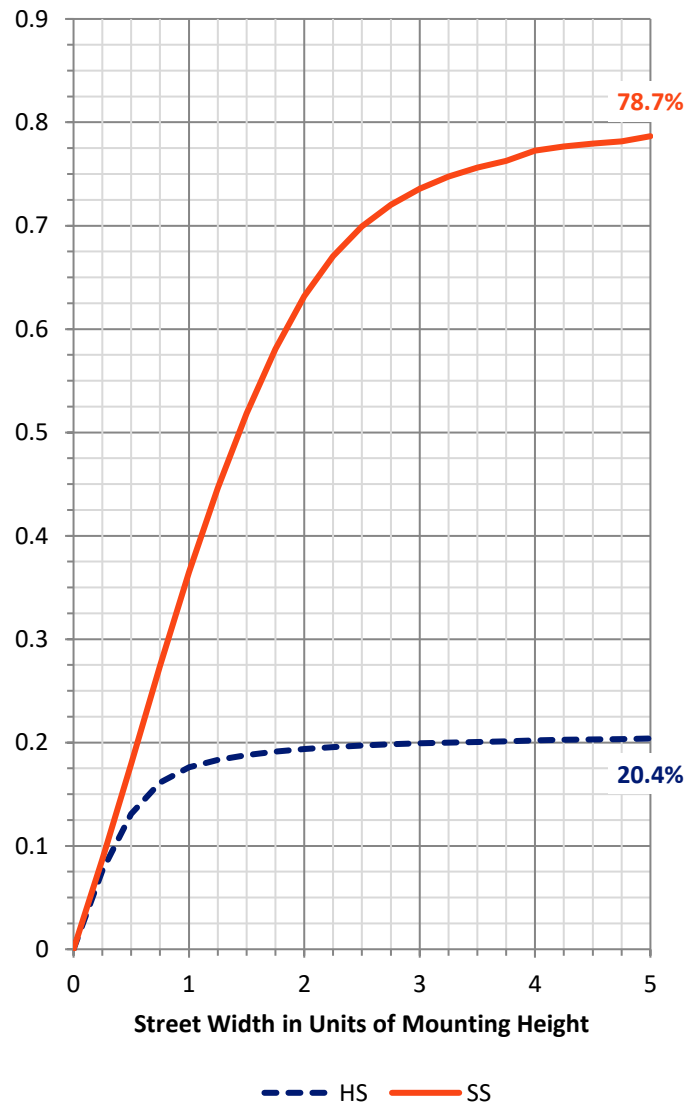
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1232.5	0.0	1232.5
	% Fixture	20.7	0.0	20.7
Street Side	Lumens	4720.2	0.0	4720.2
	% Fixture	79.3	0.0	79.3
Total	Lumens	5952.7	0.0	5952.7
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	78.5	1.3
10°-20°	235.4	4.0
20°-30°	401.6	6.7
30°-40°	606.2	10.2
40°-50°	787.9	13.2
50°-60°	1080.9	18.2
60°-70°	1662.8	27.9
70°-80°	961.2	16.1
80°-90°	138.1	2.3
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-90°	5952.7	100.0
0°-180°	5952.7	100.0

Coefficient of Utilization



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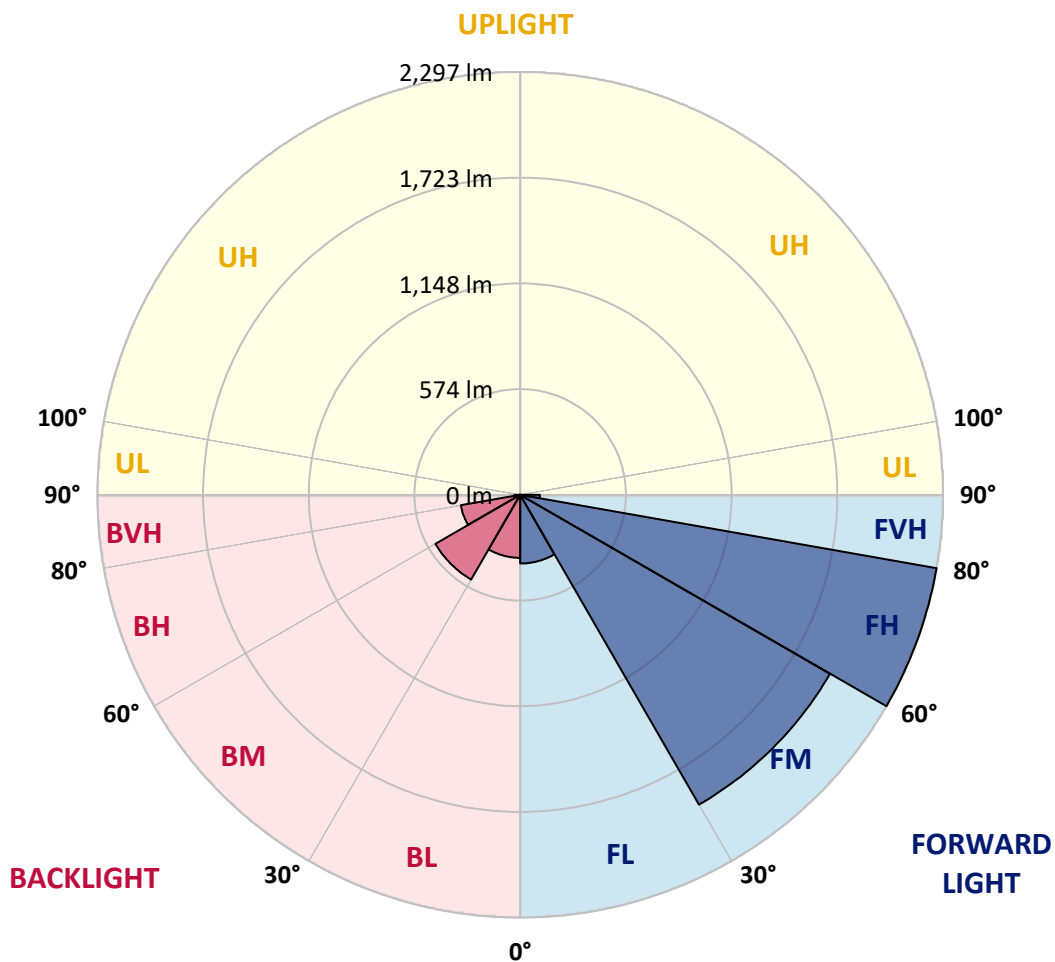
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	373.1	6.3			
FM	(30°-60°)	1943.3	32.6			
FH	(60°-80°)	2297.0	38.6			G2/5000
FVH	(80°-90°)	106.9	1.8			G2/225
BL	(0°-30°)	342.4	5.8	B1/500		
BM	(30°-60°)	531.7	8.9	B1/1000		
BH	(60°-80°)	327.1	5.5	B1/500		G1/500
BVH	(80°-90°)	31.2	0.5			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G2

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	47.5°
0°	814.4	814.4	814.4	814.4	814.4	814.4	814.4	814.4	814.4	814.4	814.4
2.5°	793.6	794.0	794.4	794.4	795.6	795.6	797.6	798.8	799.2	801.6	803.2
5°	778.8	778.4	778.8	779.6	781.6	783.2	787.2	790.0	792.4	796.4	798.4
7.5°	772.4	773.2	774.0	774.4	776.0	780.0	783.6	786.4	791.2	796.0	798.0
10°	780.8	782.0	780.8	781.6	781.6	785.2	786.8	788.8	792.4	796.8	798.0
12.5°	800.4	802.8	800.4	798.4	796.8	800.0	799.2	797.6	799.6	800.8	800.8
15°	832.8	832.8	831.2	828.4	824.4	824.8	821.2	817.6	816.0	813.2	811.2
17.5°	864.4	863.6	860.0	856.4	853.6	852.4	847.2	842.4	836.8	832.4	827.6
20°	895.2	898.4	894.0	888.8	884.4	881.6	877.6	868.0	861.2	854.0	849.2
22.5°	948.4	945.6	940.8	933.2	928.8	924.0	915.6	905.2	894.8	886.0	880.0
25°	1003.2	1000.4	993.6	988.0	981.6	977.6	968.4	955.6	945.6	932.0	924.0
27.5°	1062.0	1059.6	1051.6	1047.2	1042.8	1038.0	1030.0	1016.8	1007.6	992.0	983.6
30°	1128.4	1128.0	1117.2	1116.4	1110.0	1104.8	1099.2	1088.0	1078.8	1063.2	1053.2
32.5°	1199.2	1197.6	1190.0	1187.6	1192.0	1188.4	1180.4	1168.8	1156.8	1147.6	1136.4
35°	1300.0	1297.2	1292.8	1294.8	1297.6	1307.6	1295.2	1285.2	1270.8	1258.8	1243.2
37.5°	1373.6	1369.6	1374.8	1386.0	1402.0	1409.6	1420.4	1420.8	1414.0	1398.0	1384.4
40°	1441.2	1439.6	1451.6	1467.2	1496.8	1518.4	1538.8	1548.8	1551.2	1540.8	1520.4
42.5°	1498.4	1503.2	1519.2	1543.2	1584.8	1617.6	1655.6	1679.2	1694.0	1688.4	1679.2
45°	1566.4	1568.8	1588.4	1618.8	1658.4	1712.8	1762.8	1802.8	1828.8	1828.4	1818.0
47.5°	1651.6	1652.0	1668.8	1704.4	1746.8	1802.0	1865.2	1918.4	1952.8	1954.4	1946.4
50°	1752.8	1752.0	1770.4	1804.0	1849.2	1902.4	1969.6	2036.0	2084.0	2084.0	2072.4
52.5°	1883.2	1881.6	1891.6	1921.2	1964.8	2020.8	2087.6	2164.4	2216.4	2227.6	2202.4
55°	2057.2	2059.6	2062.0	2088.0	2125.2	2169.6	2246.4	2317.2	2386.8	2393.2	2378.4
57.5°	2258.4	2250.4	2267.6	2310.0	2352.4	2408.0	2462.4	2546.0	2628.4	2642.4	2640.4
60°	2572.8	2562.4	2580.0	2634.0	2680.8	2768.4	2861.6	2969.6	3067.2	3096.0	3061.2
62.5°	2862.0	2874.8	2898.8	2961.6	3029.6	3146.4	3286.4	3471.6	3656.8	3757.6	3750.4
65°	2836.0	2824.0	2870.0	2955.6	3078.8	3227.6	3401.6	3624.8	3891.6	4094.0	4112.0
66°	2739.6	2727.2	2776.8	2874.8	3015.6	3181.2	3374.4	3601.6	3874.4	4103.2	4130.8
67.5°	2580.4	2568.0	2624.0	2713.2	2858.4	3066.8	3275.6	3524.0	3807.6	4026.8	4049.2
70°	2273.2	2256.4	2300.0	2400.8	2518.4	2720.0	2918.8	3182.0	3473.2	3648.4	3656.8
72.5°	1925.6	1886.4	1932.8	2010.4	2094.4	2261.2	2434.4	2614.4	2846.4	3008.4	3054.8
75°	1397.2	1417.6	1431.2	1482.4	1538.0	1676.0	1777.6	1928.4	2108.0	2225.2	2262.4
77.5°	741.2	772.0	791.2	842.4	934.4	1039.6	1149.6	1242.8	1360.8	1426.4	1472.0
80°	416.0	437.6	468.8	509.2	554.0	634.8	700.0	748.0	764.8	776.4	786.8
82.5°	228.8	283.6	330.0	358.0	384.4	416.8	455.6	495.6	508.4	489.2	479.2
85°	35.6	52.4	159.6	194.8	212.0	236.8	264.8	294.4	294.8	253.6	276.8
87.5°	10.0	11.2	22.8	34.4	33.6	27.2	33.6	61.2	36.0	18.0	20.8
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°
0°	814.4	814.4	814.4	814.4	814.4	814.4	814.4	814.4	814.4	814.4	814.4
2.5°	804.0	804.8	806.8	808.8	810.8	812.8	814.0	816.0	817.6	820.0	822.8
5°	800.8	802.8	806.4	810.8	814.8	818.4	821.2	825.2	828.8	832.0	836.8
7.5°	800.8	804.8	810.8	815.6	819.2	823.6	828.0	832.0	836.0	839.2	842.4
10°	801.2	805.2	811.2	816.8	820.8	825.6	829.2	832.8	837.2	839.2	843.2
12.5°	802.8	804.4	808.8	814.4	819.2	824.0	827.6	831.2	836.0	836.8	839.6
15°	810.8	808.4	809.6	813.6	818.8	822.8	826.8	829.6	832.8	832.0	834.4
17.5°	825.6	819.6	817.2	817.6	820.0	822.8	824.4	824.8	825.2	821.6	822.0
20°	845.6	837.2	831.6	828.8	825.6	822.8	818.4	813.2	808.4	801.2	800.4
22.5°	875.6	863.2	857.2	849.6	840.0	828.0	817.2	804.4	794.0	783.2	779.2
25°	919.2	906.4	900.0	888.0	870.8	853.6	838.0	820.8	805.6	792.8	786.8
27.5°	977.6	964.8	958.0	945.6	924.4	907.2	885.6	867.2	848.8	830.0	822.4
30°	1048.4	1037.2	1029.6	1019.6	1001.2	982.4	957.2	928.8	899.6	869.6	854.8
32.5°	1132.0	1119.6	1114.0	1102.4	1083.2	1063.6	1035.6	999.2	950.4	903.2	873.6
35°	1236.4	1222.4	1216.0	1200.8	1178.4	1149.6	1119.6	1070.8	1004.8	939.2	890.8
37.5°	1376.0	1344.8	1323.6	1288.8	1252.8	1212.4	1169.6	1119.6	1041.6	960.4	893.2
40°	1499.6	1468.0	1427.2	1377.2	1321.2	1265.6	1216.8	1160.0	1075.2	975.6	885.6
42.5°	1653.2	1597.2	1532.0	1464.4	1390.0	1321.6	1263.6	1196.8	1098.0	979.6	864.4
45°	1793.6	1726.8	1639.6	1549.6	1457.2	1371.2	1306.0	1231.6	1117.6	979.6	838.8
47.5°	1921.6	1841.6	1737.2	1625.2	1517.6	1423.6	1349.6	1267.2	1145.2	992.0	831.2
50°	2040.0	1948.0	1829.2	1699.2	1578.4	1478.0	1398.4	1312.8	1187.2	1024.0	849.6
52.5°	2164.8	2067.2	1922.4	1784.4	1651.2	1543.6	1458.8	1369.2	1241.6	1074.4	882.0
55°	2328.4	2214.0	2049.6	1897.6	1751.2	1632.4	1536.0	1436.8	1301.2	1131.2	921.6
57.5°	2586.4	2420.4	2256.0	2058.4	1920.4	1764.0	1658.4	1544.4	1398.0	1205.2	981.2
60°	3038.0	2834.0	2636.4	2409.2	2238.8	2075.2	1915.6	1766.8	1590.4	1372.4	1112.0
62.5°	3682.8	3475.6	3165.2	2887.2	2630.0	2413.2	2205.2	2016.0	1789.6	1551.2	1273.2
65°	4068.0	3830.8	3460.8	3087.2	2774.8	2506.0	2268.0	2036.4	1792.0	1559.6	1322.0
66°	4098.8	3874.4	3479.2	3084.4	2760.0	2481.2	2233.6	1994.0	1743.6	1521.2	1306.0
67.5°	4041.6	3848.4	3441.6	3030.0	2698.4	2397.2	2142.8	1891.6	1640.0	1434.0	1252.8
70°	3638.0	3498.4	3149.6	2764.0	2433.2	2167.6	1899.2	1657.6	1419.2	1246.0	1111.6
72.5°	2982.4	2805.6	2561.6	2302.4	2042.0	1806.4	1562.4	1356.8	1156.8	1030.8	935.6
75°	2190.8	2031.6	1762.8	1601.2	1429.2	1281.2	1116.8	922.0	780.0	716.8	693.6
77.5°	1388.8	1216.0	989.2	810.8	697.2	599.2	472.4	375.6	300.8	313.2	346.8
80°	701.6	604.4	452.4	357.2	308.8	256.8	203.2	154.0	112.4	128.4	145.2
82.5°	450.4	376.0	299.6	236.0	199.2	175.6	140.4	102.0	76.0	85.6	104.8
85°	271.2	229.2	182.8	149.6	130.0	108.4	79.6	56.4	56.0	60.0	74.0
87.5°	41.2	58.8	34.0	36.4	38.4	41.2	36.4	30.8	26.8	34.8	44.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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CANDELA DISTRIBUTION (continued):

	105°	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°
0°	814.4	814.4	814.4	814.4	814.4	814.4	814.4	814.4	814.4	814.4	814.4
2.5°	825.6	826.4	828.0	830.0	829.6	832.4	834.0	832.4	836.0	836.0	838.0
5°	840.8	842.0	844.8	846.8	847.6	850.0	850.8	850.4	851.2	851.6	852.4
7.5°	845.2	848.4	849.6	850.8	851.2	852.0	852.0	851.2	851.2	850.8	851.6
10°	844.0	845.2	846.0	845.6	845.6	844.8	844.4	844.0	844.0	843.2	844.4
12.5°	840.0	840.0	840.0	839.2	839.2	838.8	838.8	838.8	839.6	840.0	842.0
15°	832.0	832.0	832.8	832.4	833.6	835.6	838.0	839.6	841.6	842.0	843.2
17.5°	819.6	820.0	822.4	827.6	832.8	838.8	843.2	844.4	842.8	838.8	836.0
20°	798.0	803.2	812.8	825.2	836.8	844.4	846.4	841.6	834.0	823.6	818.0
22.5°	778.8	789.2	806.4	826.8	841.2	846.4	840.4	829.2	815.6	803.6	795.2
25°	786.4	798.4	816.4	834.0	843.2	840.4	828.4	812.4	798.0	784.0	770.4
27.5°	818.4	830.4	843.2	848.4	845.2	834.8	818.0	800.8	781.6	761.6	744.8
30°	848.8	855.6	856.4	851.2	839.6	822.8	803.2	783.2	758.8	734.8	713.6
32.5°	858.4	850.4	836.0	821.2	805.2	788.0	765.2	738.8	712.8	685.6	662.0
35°	855.6	823.2	787.6	756.0	736.8	717.2	696.4	661.2	632.0	608.8	593.6
37.5°	830.4	771.2	716.4	670.4	640.4	617.2	586.4	557.2	532.0	521.6	509.2
40°	795.2	704.8	628.8	564.4	533.2	503.6	469.2	446.8	439.6	430.0	430.4
42.5°	744.8	627.2	529.2	455.2	421.2	388.8	364.4	351.2	351.6	343.6	345.2
45°	691.6	549.2	426.0	352.4	318.8	291.2	277.6	273.6	274.0	274.4	272.0
47.5°	659.2	488.4	341.6	267.2	237.6	222.0	214.8	212.8	213.2	213.6	210.8
50°	654.4	456.8	285.2	204.4	185.2	176.4	172.8	170.8	170.8	169.2	166.8
52.5°	668.0	448.8	257.6	177.2	158.8	150.8	148.0	146.4	144.0	140.8	136.4
55°	689.6	456.0	249.2	168.0	150.0	142.0	138.4	137.6	133.6	127.6	120.4
57.5°	729.6	482.0	254.8	170.4	151.6	144.4	142.0	141.2	135.6	126.4	117.2
60°	844.4	557.6	282.8	184.0	163.2	157.2	157.2	156.0	148.4	135.2	122.0
62.5°	1002.8	668.4	320.8	202.8	179.2	178.4	185.2	185.6	172.0	150.8	130.0
65°	1079.2	720.4	334.0	206.8	183.6	192.8	206.4	206.4	187.2	158.0	131.2
66°	1079.6	719.2	330.0	202.0	178.8	190.8	204.8	204.8	184.8	156.0	129.2
67.5°	1052.0	696.8	316.8	193.2	168.0	179.2	191.6	191.2	173.2	148.0	123.6
70°	943.6	616.4	279.2	178.8	155.2	155.6	160.0	157.2	145.2	128.0	112.4
72.5°	813.6	515.6	242.0	169.6	145.2	137.6	134.0	131.6	124.0	113.6	104.0
75°	624.0	400.4	210.8	161.2	136.4	123.2	118.4	116.4	111.2	105.2	97.6
77.5°	382.4	274.4	178.8	147.6	126.4	114.4	109.2	105.2	100.0	94.4	89.2
80°	164.8	165.6	143.2	125.2	110.0	96.0	89.2	84.4	81.6	79.6	76.8
82.5°	115.2	118.8	109.2	97.2	84.0	74.0	68.0	66.8	67.2	67.2	66.4
85°	86.4	84.8	76.4	69.6	63.6	57.2	52.4	52.0	53.6	53.6	52.4
87.5°	50.0	50.4	43.2	40.4	42.0	36.0	32.8	33.2	37.2	36.8	36.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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CANDELA DISTRIBUTION (continued):

	160°	165°	170°	175°	180°
0°	814.4	814.4	814.4	814.4	814.4
2.5°	838.0	839.2	838.8	840.0	838.8
5°	853.6	853.2	852.8	854.4	852.4
7.5°	851.2	851.6	851.6	851.6	851.2
10°	845.2	846.8	847.6	849.2	848.8
12.5°	843.2	845.6	848.0	850.4	850.8
15°	843.6	845.2	846.4	847.6	848.0
17.5°	833.2	832.8	831.6	830.8	830.0
20°	812.0	810.0	808.0	804.8	806.4
22.5°	785.6	780.0	773.6	768.4	768.0
25°	754.8	744.4	734.0	727.2	724.8
27.5°	727.6	715.2	704.4	698.4	696.8
30°	695.2	684.0	674.4	669.2	666.0
32.5°	647.2	638.4	626.4	622.4	622.0
35°	580.4	573.6	565.2	563.6	561.6
37.5°	504.8	502.4	498.4	493.6	492.8
40°	424.0	425.6	424.4	421.6	417.2
42.5°	346.0	348.8	349.2	351.2	353.2
45°	275.6	278.0	278.0	280.0	282.4
47.5°	211.6	210.0	211.2	213.2	214.4
50°	160.0	158.8	156.8	155.2	153.6
52.5°	128.8	126.4	120.8	119.2	117.6
55°	113.6	109.2	105.2	103.6	103.6
57.5°	109.2	103.6	99.2	97.2	96.4
60°	110.0	102.0	96.4	93.2	92.0
62.5°	113.6	102.4	94.8	91.2	90.0
65°	113.2	101.6	94.4	90.4	89.2
66°	111.2	100.4	93.6	90.0	89.2
67.5°	108.0	98.8	92.8	89.6	88.4
70°	101.6	95.6	91.2	88.4	87.2
72.5°	96.4	92.4	88.4	85.2	84.4
75°	91.6	87.6	84.0	82.4	81.2
77.5°	84.4	80.8	78.8	77.2	76.4
80°	74.8	72.4	70.0	68.4	67.2
82.5°	65.2	62.0	59.6	58.4	57.6
85°	53.2	51.2	47.6	45.2	44.8
87.5°	35.6	33.6	32.4	30.4	28.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)